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DNC C1991-006646

Preparation of terminally unsatd. hydrocarbon(s) derivs. - by co-metathesis of long chain cpds. with ethylene in presence of catalyst to give medium chain length.

DC D22 D25 E17 F06 J01

IN HAAGE, K; SELENT, D

PA (DEAK) AKAD WISSENSCHAFTEN DDR

CYC :

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Terminally unsatd. hydrocarbons of medium chain length are prepared by cometathesis of long-chain hydrocarbons with internal C=C bonds, with ethylene, at 90-150 deg.C, during up to 3 h, at an ethylene pressure of 4.5-20 MPa, in presence of a catalyst comprising (a) a W(VI) halide, (b) a tetraalkyl-Sn cpd., and (c) an organo-Al cpd. of the type of AlR3, XAlR2, X3Al2R3 or X2AlR. X = halogen; R = 1-8C alkyl. Pref., components of the catalyst are WC16, (Me)4Sn and (Et)3Al or EtAlCl2, in molar ratio of 1:0.9-3.5:0.5-1.2. The ratio of catalyst:raw material is 1:25-50. Reaction time is 0.1-0.5h. USE/ADVANTAGE - The terminally unsatd. hydrocarbons are raw materials for synthesis of surfactants, e.g. for cleaning and disinfecting compsns. for aids in the textile industry, or in processing ores. Fatty acids with internal unsatn., and derivs., e.g. esters and nitriles, can be reacted, and carboxylic acid esters of medium chain length are also prepared Catalyst activity and selectivity are high. The process is reproducible, can be used on the large scale, and may be continuous. Reaction times are short. No homo-metathesis prods. are formed. 0/0

FS CPI

FA AB; DCN

MC CPI: D11-D01; E10-J02C2; F01-H06; F03-C; F03-C05; J03-B01; N03-C; N05-A